



**S U B U R B A N**  
**Ear, Nose & Throat**  
**Associates, Ltd.**

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**MASTOIDECTOMY (with or without tympanoplasty)**

**Patient Information and Informed Surgical Consent**

A mastoidectomy is a surgical procedure that removes diseased mastoid air cells. These cells are located behind your middle ear in a hollow space in your skull. Typically, a mastoidectomy (with or without **tympanoplasty**) is recommended for patients that have a cholesteatoma and/or a chronically infected ear that has failed medical management (chronic otitis media). Your doctor at Suburban Ear, Nose, and Throat is uniquely trained to perform mastoidectomy surgery.

A cholesteatoma is a benign skin cyst that grows inside the ear. Most cholesteatomas occupy the middle ear space behind the tympanic membrane (eardrum). Occasionally, cholesteatomas arise from the external ear canal, and then are referred to as canal cholesteatomas. Canal cholesteatomas can usually be managed conservatively with routine ear cleaning in the office, rarely they will require surgical intervention. Middle ear cholesteatomas, on the other hand, almost always require surgery. They typically occur in children and adults who have chronic eustachian tube dysfunction (ETD), a problem with ventilation or "popping" the ears. When ETD is present for many years, it can lead to development of a cholesteatoma. Although most cholesteatomas are acquired, some patients are actually born with the cholesteatoma; this is called a congenital cholesteatoma.

Cholesteatomas grow very slowly, but they can cause significant damage to any structure in the ear that they come in contact with. Commonly, the cholesteatoma erodes into the tiny bones (ossicles) in the middle ear that allow for hearing. Untreated, cholesteatomas can lead to hearing loss, infection, chronic ear discharge, ear pain, dizziness, facial paralysis, or in rare cases infection that spreads to the brain. Due to the seriousness of these complications, cholesteatomas need to be surgically removed via the operation termed mastoidectomy (with or without tympanoplasty). The goal of surgery is to remove the entire cholesteatoma and, if possible, reconstruct the hearing. Following surgery, patients are usually seen on a regular basis to clean the ear and make sure the cholesteatoma does not return.

Mastoidectomy is a typically an elective surgical procedure; that is, scheduled at the patient's convenience. Occasionally, an emergency mastoidectomy is done for patients with acute mastoiditis, a severe ear infection that can lead to serious or even life-threatening complications.

Evaluation of a patient with suspected middle ear or mastoid disease includes a complete history and physical examination, hearing testing, and often a special x-ray called a CT scan of the temporal bones (the skull bone that contains the structures of the ear). This test helps to visualize the ear anatomy and better

assess the extent of ear disease.

During a mastoidectomy, a well-hidden incision is placed behind the ear. This provides exposure to the mastoid bone, which is located behind the ear. The bone is partially drilled away to remove the infected tissue or cholesteatoma cyst. Mastoidectomy is performed either as a "canal-wall-up" or "canal-wall-down" technique. The decision on which technique to use is sometimes determined at surgery and other times determined prior to surgery. Numerous factors help your doctor decide which technique is best for you.

*Canal-wall-up* procedures have the advantage of less local wound care during the initial healing period, and over the years to follow. However, canal-wall-up procedures have a much higher incidence of recurrent cholesteatoma, which would then require further surgery. In addition, with canal-wall-up surgery, it is often recommended that the patient undergo a second planned surgery to determine if there is recurrent cholesteatoma and to attempt hearing restoration. Occasionally, patients will need an unplanned "second look" operation in the future.

*Canal-wall-down* technique allows for an open cavity in which your doctor is able to better access the site of previous cholesteatoma or infection. Canal-wall-down procedures have a much lower chance of cholesteatoma recurrence needing further revision surgeries. However, there is significantly more office care needed over time. Even when healed well, occasional visits with an ENT physician will be needed for the remainder of the patient's lifetime. Also, with canal-wall-down procedures, a meatoplasty is performed (surgery to enlarge the opening of the ear canal to visualize the mastoid cavity).

Usually, mastoidectomy surgery is done as an outpatient, but expect to take one week off from work or school to allow for recovery. The ear is usually fully healed six weeks to three months after surgery. Often, mastoidectomy is combined with **tympanoplasty (with or without ossicular reconstruction)**. Tympanoplasty refers to the middle ear and eardrum portion of the surgery, while the mastoidectomy describes the surgery in the mastoid cell system.

The indications and risks of surgery, as well as expected outcomes, must be understood prior to proceeding with surgery. In addition, you must understand your alternatives to the surgery. Your alternative is not to have the surgery performed, and continue with medical management of your problem. This would leave you in your current condition.

### **SURGICAL RISKS:**

The risks of mastoidectomy with or without tympanoplasty will be discussed at the preoperative visit and should be completely understood by the patient prior to surgery.

**BLEEDING:** Bleeding is usually insignificant during this ear surgery. If significant bleeding was to occur, then the procedure is terminated.

**INFECTION:** Immediate postoperative infection or early postoperative infection is rare. You will likely be given a preoperative and postoperative antibiotic. Local infection with drainage in a healed canal-wall-down mastoid cavity is relatively common. This typically requires topical

antibiotics and/or antiseptics, frequent in-office local wound care visits, and on occasion, oral antibiotics. On occasion, revision surgery is needed.

**RECURRENT DISEASE:** Both cholesteatoma and chronic infection can recur. This may lead to an unplanned or planned revision surgery months or years later. As an example, the risk of recurrent cholesteatoma in a canal-wall-up procedure is reported as high as 40-60%.

**HEARING LOSS:** Your hearing may not change with the surgery. On occasion, we can improve your hearing by rebuilding the middle ear bones (ossiculoplasty or ossicular chain reconstruction). Your surgery carries a <1% chance of completely losing the hearing in the ear that is to have the surgery. There is a chance of the hearing being worse than before the surgery. When the surgery is being performed for cholesteatoma, hearing restoration or improvement is actually thought of as a secondary goal with the primary goal to remove the disease. Sometimes purposefully the hearing is temporarily worse after the first surgery with the plan to attempt hearing restoration at the 'second-look' procedure 9-15 months later.

**TINNITUS:** There is a small risk of causing tinnitus (ringing in the ear) with your surgery or making it worse if you had tinnitus pre-operatively.

**EAR POSITION:** During healing your ear may protrude out more or be closer to your head. This is usually temporary, but if permanent, can be revised surgically at a later date to improve ear position.

**FACIAL NERVE INJURY:** During surgery, we monitor the function of your facial nerve. There is a <2% risk of injuring the facial nerve. This nerve controls the facial muscles on the side of surgery. Injury to this nerve can cause paralysis and drooping of the muscles on that side of your face. If there is injury, surgical repair would be performed; however, normal mobility of the face would not be expected.

**TASTE CHANGE:** There is a small nerve that runs in your middle ear that often needs to be removed to adequately treat your cholesteatoma or chronic infection. You may experience a metallic taste in your mouth for several months. This would dissipate over time. It is generally not a problem.

**CEREBROSPINAL FLUID LEAK:** The top of the mastoid and middle ear borders a portion of the brain. There is a very small risk of injury to the covering of the brain, which would lead to leak of "spinal fluid" out your ear. If this occurs, this would require further surgery for repair. If this occurs in surgery, a repair would be performed at that time. Untreated, this injury would make you susceptible to meningitis.

**BRAIN INJURY:** The brain lies within millimeters of the mastoid cavity. If injury was to occur, this is not repairable.

**ANESTHESIA RISKS:** As with any type of surgery, the risks of anesthesia such as drug reaction, breathing difficulties and even a very remote chance of death are possible. Please discuss these risks with your anesthesiologist.

## GENERAL POST-OPERATIVE CARE

Please keep your ear dry after surgery. When your doctor allows you to shower, the ear canal can be closed off with a cotton ball lightly coated in Vaseline and/or you may place a small cup over your ear during shower.

Nose blowing: We request minimal nose blowing for three or four weeks after surgery as this may dislodge any graft reconstruction that may have been performed.

Exercise: We request only casual activity for the first two weeks after surgery. Thereafter, exercise is generally allowed.

Postoperative visits: You may be asked to return to our office one to two days after surgery and then typically seven to nine days after surgery. Over the next several months, we will ask that you return several times depending on the procedure performed.

*Alternatives:* The alternative to surgery is not to have it performed, and to continue with medical management. This would leave you in your current condition.

*At Suburban Ear, Nose and Throat Associates Ltd., we go to great lengths to try to help you understand your plan of care. If at any time you have questions or concerns please call us at (847) 259-2530.*

**I have been given an opportunity to ask questions about my condition, alternative forms of therapy, risks of non-treatment, the procedure and risks and hazards involved. I have sufficient information to give this informed consent. I understand every effort will be made to provide a positive outcome, but there are no guarantees.**

Patient name PRINTED: \_\_\_\_\_

Patient **signature**, or if applies Parent/Guardian/POA **signature**: \_\_\_\_\_

If applies, Parent/Guardian/POA **printed** name: \_\_\_\_\_

If applies, Parent/Guardian/POA **relationship** to patient: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Witness: \_\_\_\_\_ Date: \_\_\_\_\_